950-178 Anginal Chest Pain in Very Elderly Patients With Severe Aortic Stenosis: Does it Predict Coronary Artery Disease

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Patients with severe aortic stenosis without angina usually have been shown to have normal coronary arteries or non-obstructive coronary artery disease (CAD). However, the significance of the presence or absence of angina in very elderly patients with severe aortic stenosis is unknown. We evaluated the presence of coexisting CAD in elderly patients (age 81 ± 12 years) with severe calcific aortic stenosis in relation to history of angina. Patients with history of myocardial infarction or CABG were excluded. All patients were referred for balloon aortic valvuloplasty from 1989 to 1996 (mean aortic valve area 0.55 ± 0.32 cm^2). Cineangiograms and medical records were reviewed for coronary anatomy and historical data in 90 patients. All angiograms were interpreted visually by a single experienced angiographer, blinded to the patient's history. *Results:* Significant CAD (> 50% diameter stenosis) was strongly associated with the presence of angina. Most symptomatic patients had > 70% stenosis.

Stenosis	Angina (n = 32)	No angina (n = 67)
> 70%	15 (65%)	3 (4%)*
50–70%	3 (13%)	9 (13%)
<50%	5 (22%)	55 (82%)*

Conclusion: In this selected very elderly patient population with severe aortic stenosis, the presence of angina was a strong determinant of significant CAD; the absence of angina predicted non-significant stenosis.

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Presentation Hour: 3:00 p.m.–4:00 p.m.

951-129 Influence of Age and Sex on Angiographic Change in the Lipoprotein and Coronary Atherosclerosis Study (LCAS)

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More data are needed on the CHD benefit of lipid lowering in the elderly and women. LCAS randomized pts with angiographic CHD and LDL-C of 115–190 mg/dl despite diet to fluvastatin (FL) 20 mg bid or placebo for 2.5 yr; adjunctive cholestyramine was given when prerandomization LDL-C remained ≥160. The primary endpoint was per-lesion per-pt change by QCA in minimum lumen diameter (MLD). Of the 340 pts with evaluable lesions, 25% were aged 65+ and 17% were women. In placebo pts, mean progression (PR) was lower among those aged 65+ than among those <65, and lower among women than men (table). FL treatment reduced PR to about the same lower rate in both age groups (no significant differences in response between the age groups), reduced PR in men, and reversed PR in women. More women than men had LDL-C ≥ 130 mg/dl; with adjustment for this difference, improvement in MLD with FL treatment was significantly better in women than men ($p < 0.05$).

Mean Percentage Change in MLD after 2.5 Yr

	All pt (n = 340)	Age < 65 (n = 254)	Age 65+ (n = 86)	Male (n = 283)	Female (n = 57)
Placebo	−6.4	−7.3	−3.9	−6.9	−3.4
FL	−2.4	−2.4	−2.6	−3.6	+2.4

Thus, lipid lowering by FL was as beneficial in older as in younger pts, and women responded to treatment as well as or better than men.

951-130 Severity and Morphologic Abnormalities of Aortic and Mitral Regurgitation in the Elderly: The Cardiovascular Health Study (CHS)

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Aortic (AR) and mitral regurgitation (MR) represent important causes of cardiovascular disease; however, the prevalence, severity, and morphology of valvular regurgitation (REG) in a group of randomly selected elderly have not been well-defined. In CHS, a multicenter NHLBI study, 5,201 subjects (age ≥65 years) underwent two-dimensional (2D) and color Doppler echocardiographic examinations. Severity of REG by color Doppler was defined as a jet/left atrial area of <20% (mild) and ≥20% (mod-severe) for MR and jet/LV outflow tract height <46 (mild) and ≥46% (mod-severe) for AR. Of 19.9% with AR, 6.2% was mod-severe; of 30.1% with MR, 26.6% was mod-severe. Aortic valve morphology by 2D echo showed increased prevalence of thickened leaflets in subjects with AR (29%) compared to no AR (22%, $p < 0.001$) but the prevalence of thickened leaflets in mild and mod-severe AR subjects was similar (29 vs 31%). Dilated aortic root was present in 1.1% of those with AR vs 0.46% with no AR ($p < 0.05$). Mitral valve morphology showed prolapse in 1.9% with and 0.53% without MR ($p < 0.001$) and was more frequent in those with mod-severe MR (3.9% vs 1.2%, mild, $p < 001$). Thickened mitral leaflets was present in 11.6% with MR (13% mild; 6.5% mod-severe) vs 7.1% with no MR ($p < 0.001$). Mitral annular calcification (10% vs 5.9%, $p < 0.001$) and LV wall motion abnormalities (9.6% vs 5.6%, $p < 0.001$) were more common in subjects with than without MR, but did not predict severity.

Conclusions: In randomly selected community dwelling elderly: 1) AR and MR are common but mod-severe REG is unusual; 2) Morphologic abnormalities by 2D echo, most commonly valve thickening, are more frequent in those with AR or MR; and 3) Severity of REG cannot be predicted by valve morphology in this elderly population.

951-131 Predictors of Mortality in Elderly Patients With Severe Aortic Stenosis. A 5 Year Follow-up

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Recognition of the predictors of mortality in elderly patients (pts) with severe aortic stenosis (AS) is important for clinical decisions. 56 pts (80.4 ± 5.2 years) with severe AS (valve area 0.6 ± 0.2 cm^2 and/or LV-aortic gradient of 66.4 ± 20.8 mmHg) were followed biannually for a mean period of 72 months. We analyzed the relation between mortality and symptoms, EKG, and Echo data by uni and multivariate analysis. 23% of the pts were asymptomatic and 77% symptomatic (dyspnea, angina or syncope). 32% of the pts died during follow-up.

The following parameters had a positive correlation with mortality by univariate analysis: increased age ($p = 0.01$), higher end-systolic volume ($p = 0.006$), left atrial enlargement by EKG ($p = 0.04$), presence of left bundle branch block ($p = 0.02$), and presence of dyspnea ($p = 0.003$), while there was a negative correlation (lower mortality) with: presence of sinus rhythm ($p = 0.004$) and absence of symptoms ($p = 0.02$). Multivariate analysis showed a positive correlation between mortality and increased age ($p = 0.002$) and EKG left atrial enlargement ($p = 0.002$), and a negative correlation (lower mortality) with the presence of sinus rhythm ($p = 0.0007$) and the absence of symptoms ($p = 0.04$).

In conclusion: 1. The most powerful predictors of mortality were increased age, absence of sinus rhythm, left atrial enlargement by EKG and the presence of symptoms; 2. The presence of symptoms is a more powerful predictor of mortality than any Echo-derived index. 3. Elderly pts with severe AS but asymptomatic and in sinus rhythm have a low risk of death, and a conservative approach is adequate in such cases.

951-132 Older Patients With Nonvalvular Atrial Fibrillation Have Lower Left Atrial Appendage Velocities Despite Higher Left Ventricular Ejection Fraction and Similar Left Atrial Size

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Elderly pts with nonvalvular atrial fibrillation (NVAF) are at higher risk of embolism regardless of other risk factors. Low left atrial appendage (LAA) velocities in NVAF predict increased risk of embolism. We studied 30 consecutive pts [age 43–91 yrs (mean 70 ± 11), 53% men] with NVAF by transthoracic and multiplane transesophageal echocardiography to evaluate the effect of age on LAA velocities. The following were compared in pts younger (n = 16, age 62 ± 7 yrs) and older (n = 14, age 79 ± 6 yrs) than 70 yrs of age: LA diameter (D) and volume (V); LVD, mass (M), and EF; LAA area (A) and V; LAA peak emptying and sum of peak emptying and peak filling velocities (PE and PE+F); spontaneous echo contrast (SEC) and mitral regurgitation (MR). There was no difference in LAD (4.7 ± 0.4-vs-4.8 ± 0.6 cm), LAV (93 ± 38-vs-100 ± 38 ml), LVM (248 ± 96-vs-234 ± 78 g), LAA A (5.9 ± 2.9-vs-4.6 ± 2.3 cm^2) or LAA V (5.7 ± 5.4-vs-3.6 ± 3.4 ml) between the 2 groups (all p = NS). Older pts, however, had lower LAA PE (23 ± 5-vs-34 ± 17 cm/s, $p = 0.01$), lower PE+F (52 ± 14-vs-72 ± 35 cm/s, $p = 0.03$), smaller LV diastolic D (4.3 ± 0.6-vs-4.9 ± 1.0 cm, $p = 0.04$), and